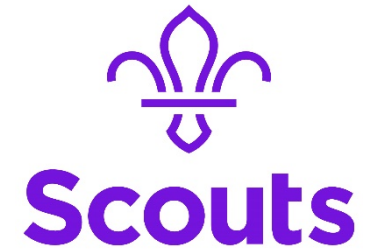
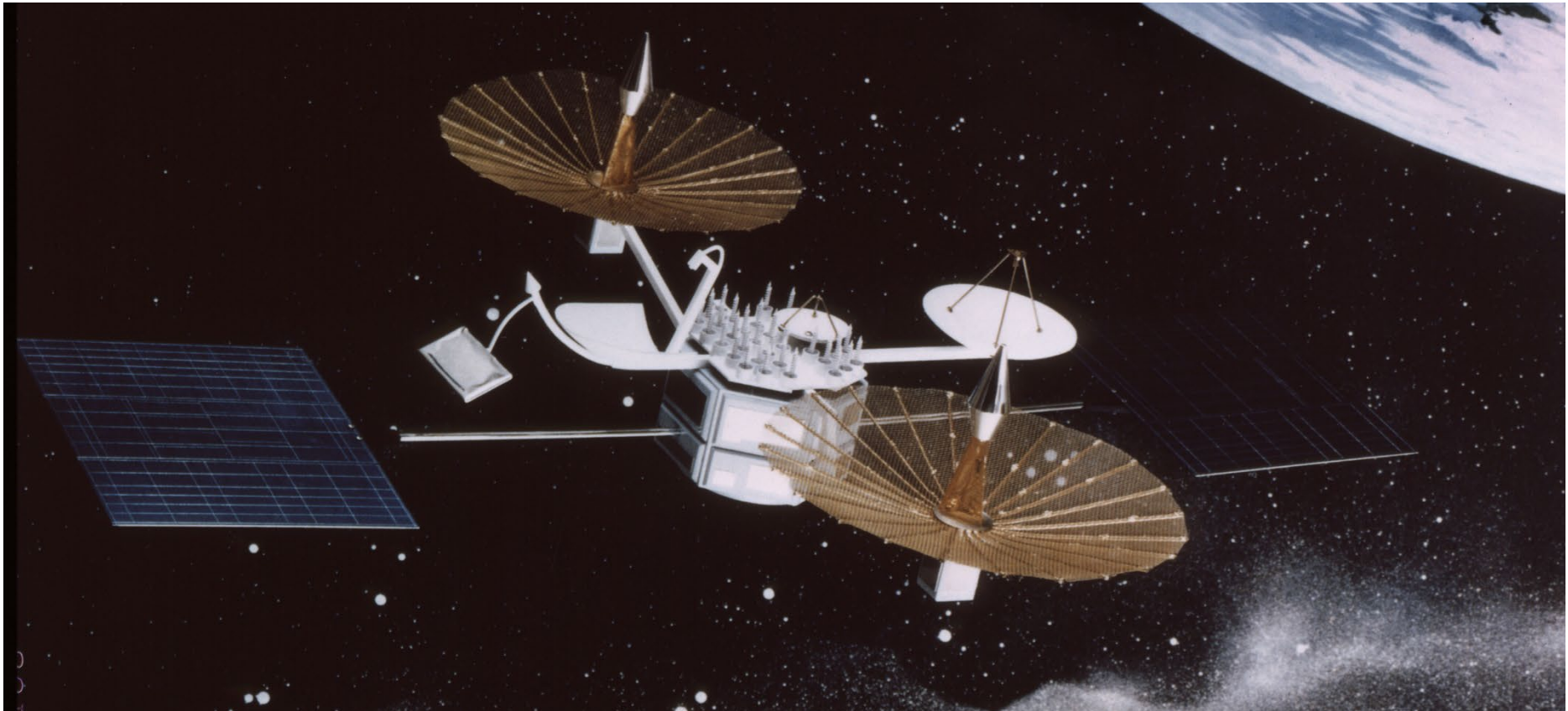


Satellite examples and features

Use these images to help you create your own orbital object.



Communications satellite



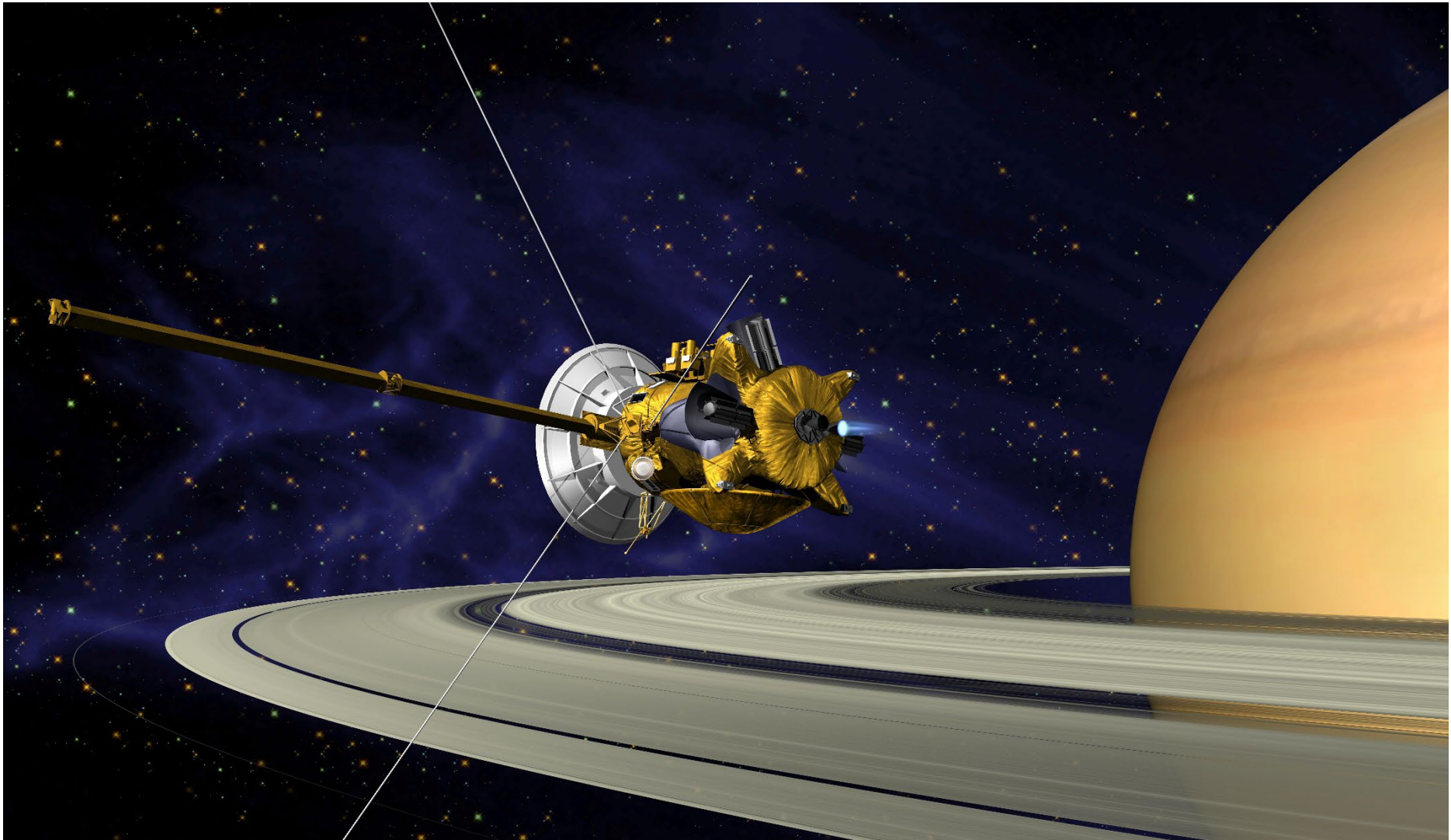
© NASA Image and Video Library; [Space Shuttle Projects](#)

Earth observation satellite



© NASA Image and Video Library; [Ocean Surface Topography Mission/Jason 2 Artist Concept](#)

Cassini-Huygens spacecraft



© NASA Image and Video Library; [Artists Conception of Cassini Saturn Orbit Insertion](#)

Goonhilly satellite dish, Cornwall



© GES - Goonhilly Earth Station Ltd.

The main parts of a satellite

Satellites are often covered with a reflective surface, like foil, to protect it from the heat and radiation from the sun.

The **payload** is the part that performs the specific purpose of the satellite. Around Earth, this could be providing an internet or phone connection, navigation for car satnavs or measuring the weather. In satellites that we send to study other places in the solar system, this could be performing various scientific measurements or taking photographs.

Solar panels generate electricity from sunlight. They are folded away while the satellite is being launched from Earth and then unfold once the satellite is in space.

The **antenna dish** usually uses the microwave region of the electromagnetic spectrum to send and receive signals between different places on the Earth or to send measurements and photographs back to Earth from another planet or object that the satellite is studying in the solar system.

The body of the satellite is called the **platform** or the **bus**. These come in all shapes and sizes from the size of a shoebox up to the size of a small lorry. The platform holds the power, propulsion and other systems. It also holds a space for the payload, which performs the specific job of the satellite (see some of the payload types above). For Earth based satellites, you can think a particular platform like a van. Each van will have an engine, wheels and steering, but it could be used as an ambulance or a campervan or even an ice cream van! Satellites that we send to study other places in the solar system are usually one of a kind and their platform is built specially to suit the place it is exploring.

The main engine is part of the **propulsion system**. After the satellite is launched into space, the main engine is fired to push the satellite to its final orbit round Earth or out to a distant part of the solar system.

The propulsion system also has small rockets called **maneuvering thrusters**. These are used to turn the satellite or change the position of the satellite or avoid collisions with other satellites or debris if it is in orbit round the Earth.

